

The Patent Office of the People's Republic of China

[51]Int.Cl⁶

A61B 17/88

[12] Specification of Utility Model

[21] ZL Patent Number: 96237907.7

[45] Date of Grant: July 15, 1998

[11] Grant Number: CN2286032Y

[22] Application Date: 96.12.26

[21] Application Number: 96237907.7

[24] Date of Issue: 98.5.13

[74] Patent Agency: Wuhan City Patent
Law Office

[73] Patent owner: LI Chenlin

Attorney: Zhao Senlin

Address: 125#, Boyang Street, Wuhan
City, Hubei Province, 430014

[71] Designer: Li Chenlin

Claims: 1 page;

Specification: 2 pages;

Drawings: 1 page.

[54] Title of Utility Model: Combined bone implanting apparatus for medical use

[57] Abstract

A combined bone implanting apparatus for medical use, which is to overcome the defect that the portions in bone of implants currently used in medicine are not stable and fast, and comprises a hollow body with many pores and a lower dismountable structure. When using said apparatus, the bone induced growth substance is charged in said hollow body and coated on the outer surface of said hollow body, then said apparatus is implanted in body so that the bone grows th(in) said growth substance via the pores and forms a stable and fast connection between the body and said apparatus. Thus, the therapeutical effect is improved.

Claims

1. A combined bone implanting apparatus for medical use, characterized in that it is a hollow body (1) with many pores (2) and a lower dismountable structure (3).
2. A combined bone implanting apparatus for medical use according to claim 1; characterized in that said hollow body (1) is made of thitanium with a thickness of 0.5 mm.

Specification

Combined bone implanting apparatus

The present utility model relates to a medical apparatus, in particular a combined bone implanting apparatus.

At present, the portions of various implants and bone implanting apparatus, which is embedded in bone, generally have a shape of cylinder, cone, screw cone, etc., and all are solid (infractate) body (such as artificial implanting tooth, artificial joint, fixing device in bone etc.). The most of these implants are embedding-type and are fixed by the pressure of the natural growth of bone, and the area that the implants contact with the bone is merely equal to the area of the outer surface of the portion embedded in bone. Thus, the force conduction of the implants is relatively concentrated, which results in the inferior force resistance and lower success rate, and affects the therapeutical effect.

The object of the present utility model is to overcome the aforesaid defects in the prior art, and to provide a combined bone implanting apparatus which has a simple and reasonable structure and can be readily used and stably implanted in body.

The object of the present sent utility model is achieved by designing an apparatus having a hollow body (1) with many pores (2) and a lower dismountable structure (3).

The said hollow body (1) is made of thitanium with a thickness of 0.5 mm.

The merits of the present utility model reside in the simple and reasonable structure and convenient use of said apparatus, which can expedite the growth of bone and the bonding between the implant and the bone, and can increase the contacting area between the implant and the bone. Since the structural features of the hollow body with many pores can obviously improve the absorption and buffer effect of the implant to stress, the stability and fastness

of the implant are improved, and the difficulty of operation is decreased. When using the same material, the implants manufactured according to the process of the present utility model could lead to an obviously improved therapy success rate.

The present utility model is further described in combination with the drawings.

The drawings illustrate the structural schematic drawing of using the present utility model in an implanting tooth.

The apparatus of the present utility model can be made of titanium with a thickness of 0.5 mm, which is designed as a hollow body (1) with regularly arranged pores (2) and a dismountable lower structure (3). When using said apparatus, the lower structure (3) if firstly dismounted, the bone induced growth substance is charged in said hollow body, then the dismountable lower structure (3) is mounted, and the bone induced growth substance is coated on the outer surface of said hollow body, and finally said apparatus is implanted in body by conventional operation, so that the bone grows ^{up} in said growth substance via the pores and forms a stable and fast connection between the body and said apparatus. Thus, the therapeutical effect is improved.

[19]中华人民共和国专利局

[51]Int.Cl⁶

A61B 17/88



[12] 实用新型专利说明书

[21] ZL 专利号 96237907.7

[45]授权公告日 1998年7月15日

[11] 授权公告号 CN 2286032Y

[22]申请日 96.12.26 [24]颁证日 98.5.13

[73]专利权人 李成林

地址 430014湖北省武汉市汉口鄱阳街125号
工商银行储蓄所

[72]设计人 李成林

[21]申请号 96237907.7

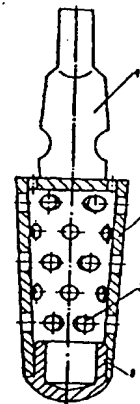
[74]专利代理机构 武汉市专利事务所
代理人 赵森林

权利要求书 1 页 说明书 2 页 附图页数 1 页

[54]实用新型名称 医用组合式骨内植入装置

[57]摘要

一种医用组合式骨内植入装置，主要解决目前医疗中各类种植体在骨内埋植部分不够稳定牢靠的弊端。它是一个中空体，其周围开有多孔，下部是一个可拆卸结构。使用时将骨诱导生长材料装入中空体内，中空体外层再辅以骨诱导生长材料，再将该装置植入体内，使其生长材料通过多孔生长，与体内稳定牢靠相接，提高了治疗效果。



(BJ)第 1452 号

权 利 要 求 书

1、一种医用组合式骨内植入装置，其特征在于：它是一个中空体(1)，周围均开有孔(2)，下部是一个可拆卸结构(3)。

2、根据权利要求1所述的医用组合式骨内植入装置，其特征在于：上述所说的中空体(1)采用厚度为0.5mm的钛制作。

说明书

医用组合式骨内植入装置

本实用新型涉及医用器具，特别是一种医用组合式骨内植入装置。

目前，利用医学生物材料制造的各种种植体及骨内植入装置的骨内埋植部分，其形态大多为圆柱体、圆锥体、螺纹圆锥体等，均为实体（如人工种植牙、人工关节、骨内固定装置等）。此类植入体在临床治疗中的植入多为嵌入式，靠骨的自然生长挤压达到固定，与骨的接触面积仅与植入体骨内部份外面积相等，受力后的力传导较为集中，抗力性较差，成功率不稳定，影响其治疗效果。

本实用新型的目的在于克服上述现有技术之不足，提供一种结构简单合理、使用方便、使植入体稳定牢靠的医用组合式骨内植入装置。

本实用新型的目的是这样实现的：本实用新型设计为一个中空体1，周围均开有孔2，下部是一个可拆卸结构3。

上述所说的中空体1采用厚度为0.5mm的钛制作。

本实用新型的优点在于结构简单合理，使用方便。可加快植入体与骨的生长结合速度，可增加种植体与骨的结合面积。由于结构上的中空及多孔的特点，植入体对受力可起到明显的分解吸收及较好的缓冲作用，从而可提高植入体生长的稳定牢靠性，可降低手术的难度。如果选用相同材料，按此工艺制造的同类种植体或骨内植入装置，在临床上的治疗成功率将得到明显提高。

下面结合附图对本实用新型作进一步描述。

附图是本实用新型用于种植牙时的结构示意图。

本实用新型可采用厚度为0.5mm的钛制作，设计为一个中空体1，周围可按一定的排列规律开有多个对称孔2，下部嵌入一个可拆卸的结构3，上方设置有种植牙4。使用之前，首先拆去下部的结构3，将骨诱导生长材料装入中空体1内，再将可拆卸结构3装上，植入时外层再辅以骨诱导生长材料，按常

规种植植入手术将其植入到体内，这种结构使其生长材料通过多孔生长，与体内牢靠稳定相接，提高了治疗效果。

说明书附图

